

CLAIMS

What is claimed is:

- 5 1. A method of calibrating a display hand in an electronic device, wherein the display hand conveys information on a display and is operatively coupled to a rotor of a stepping motor via one or more gears, the method comprising the steps of:
- initializing a counter;
- stepping the rotor of the stepping motor a predetermined number of steps in a first
- 10 direction and incrementing the counter;
- determining whether the counter is less than a predefined value representing at least the total of (i) the maximum number of steps needed from an initial position on the display to the maximum value on the display; and (ii) the number of steps needed from the initial position on the display to the position such that a channel formed in one of the one
- 15 or more gears would abut against a tab;
- and if so:
- stepping the rotor of the stepping motor the predetermined number of steps in the first direction, incrementing the counter and again determining whether the counter is less than the predefined value;
- 20 and if not:
- rotating the rotor of the motor in a direction opposite the first direction the same number of steps needed from the initial position on the display to the position such that the channel would abut against the tab.
- 25 2. A calibration assembly for use in an electronic timepiece, wherein the calibration assembly is for initializing the position of a display hand that conveys information displayable on the timepiece, the calibration assembly comprising:
- a controller for providing signals;
- a stepper motor operatively coupled to the controller and responsive to the signals,
- 30 for rotating the at least one display hand in at least one of a clockwise and counterclockwise direction in predefined increments;
- one or more gears for operatively coupling the rotor of the stepper motor to the

display hand, wherein a channel is formed within at least one of the one or more gears;

and wherein a tab is provided and positioned to be abutable against an edge of the channel;

such that when the controller causes the rotor to rotate in a predetermined direction
5 to cause the tab to abut against the edge of the channel, the position of the display hand is
in an initialized position.

3. A calibration assembly for use in an electronic timepiece, wherein the calibration
assembly is for initializing the position of a display hand that conveys information
10 displayable on the timepiece, the calibration assembly comprising:

a controller for providing signals;

a stepper motor operatively coupled to the controller and responsive to the signals,
for rotating the at least one display hand in at least one of a clockwise and
counterclockwise direction in predefined increments;

15 one or more gears for operatively coupling the rotor of the stepper motor to the
display hand, wherein at least one of the one or more gears includes a tab extending
therefrom;

and wherein a stopper is provided and positioned to be abutable against the tab;

such that when the controller causes the rotor to rotate in a predetermined direction
20 to cause the tab to abut against the stopper, the position of the display hand is in an
initialized position.

4. A method of calibrating a display hand in an electronic device, wherein the display
hand conveys information on a display and is operatively coupled to a rotor of a stepping
25 motor via one or more gears, the method comprising the steps of:

initializing a counter;

stepping the rotor of the stepping motor a predetermined number of steps in a first
direction and incrementing the counter;

determining whether the counter is less than a predefined value representing at
30 least the total of (i) the maximum number of steps needed from an initial position on the
display to the maximum value on the display; and (ii) the number of steps needed from the
initial position on the display to the position such that a tab on one of the one or more

gears would abut against a stopper;

and if so:

stepping the rotor of the stepping motor the predetermined number
of steps in the first direction, incrementing the counter and again
determining whether the counter is less than the predefined value;

and if not:

rotating the rotor of the motor in a direction opposite the first
direction the same number of steps needed from the initial position on the
display to the position such that the tab would abut against the stopper.

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5. The calibration assembly as claimed in claim 2, wherein the tab is an integral part
of the housing of the timepiece.

15 6. The calibration assembly as claimed in claim 2, wherein the controller, after the
display hand has been placed in the initialized position, provides signals for rotating the
rotor of the stepping motor in a direction opposite the predetermined direction a
predetermined number of steps so as to position the display hand to indicate an initial
value.

20 7. The calibration assembly as claimed in claim 6, wherein the predetermined number
of steps is the number of steps needed from the position such that the display hand is
indicating the initial value to the position such that the channel would abut against the tab.

25 8. The calibration assembly as claimed in claim 3, wherein the stopper is coupled to
the housing of the timepiece.

30 9. The calibration assembly as claimed in claim 3, wherein the controller, after the
display hand has been placed in an initialized position, provides signals for rotating the
rotor of the stepping motor in a direction opposite the predetermined direction a
predetermined number of steps so as to position the display hand to indicate an initial
value.

10. The calibration assembly as claimed in claim 9, wherein the predetermined number of steps is the number of steps needed from the position such that the display hand is indicating the initial value to the position such that the tab would abut against the stopper

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